10.5465/AMBPP.2016.200

LINKING P-E FIT WITH PERFORMANCE IN DIFFERENT TIME WINDOWS: DISENTANGLING CAUSAL RELATIONSHIPS

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INTRODUCTION

A central assertion in person-environment (P-E) fit theory holds that the attitudes, behaviors and decisions of employees are strongly influenced by various types of fit (Kristof-Brown et al., 2005). Past reviews and meta-analytical studies have generally reported positive correlations between measures of P-E fit and both in-role and extra-role performance, ranging from .10 to .25 for task performance and .21 to .32 for OCB (Arthur, Bell, Villado, & Doverspike, 2006; Hoffman & Woehr, 2006; Kristof-Brown et al., 2005). Even though the positive link between P-E fit and performance has been widely acknowledged in the literature, the exact nature of the relationship between both remains elusive to date as a result of both theoretical and methodological shortcomings. Theoretically, the dominant assumption involving P-E fit and performance is that P-E fit causally precedes behavioral outcomes like task performance and OCB (Hoffman & Woehr, 2006; Kristof-Brown et al., 2005). Nonetheless, there is reason to suspect that performance outcomes may also be an antecedent of P-E fit. For instance, research suggests that perceptions of P-E fit may be cultivated or constrained by self-perceived successes and setbacks in the workplace. This reversed causation hypothesis has, however, rarely been considered as an alternative explanation for researchers' prevailing normal causation thinking regarding P-E fit and performance. Methodologically, past studies on the P-E fit – performance relationship have remained largely unable to tackle the issue of directionality. This is mainly because researchers have predominantly relied on either cross-sectional designs in which all the analyzed study variables are measured at the same point in time (e.g., Chi & Pan, 2012), or longitudinal designs in which P-E fit and performance are linked in an a priori assumed normal causal order (e.g., Wang, Zhan, McCune, & Truxillo, 2011).

In order to move the field forward and increase our understanding of how P-E fit and performance are related, the present study aims to disentangle the causal relationship between person-organization (P-O) fit and person-job (P-J) fit and both task performance and OCB towards the organization (OCB-O), by simultaneously testing the normal causation and reversed causation hypothesis in a heterogeneous sample of 215 employees. In addition, directionality will be tested for in two different time windows, i.e., both in the short (one week) and in the long (four months) term. Despite the claims of early fit theorists that time should play an important role in understanding P-E fit (Caplan, 1983; Lewin, 1943), insights into how causal relationships between P-E fit and performance might differ across time frames remains limited to date. In this respect, direction, effect size, and duration may not be systematically related, in that effects may vary in terms of both causal order and strength depending on the time frame one takes into account.

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Normal Causation Hypothesis: P-E fit → Performance

The idea that a better fit between a person and its work environment will likely result in higher performance is an intuitive appealing assumption that is deeply rooted in the selection and socialization literature. In this respect, past research has clearly shown that selection and socialization processes have an obvious impact on employees' task performance and OCB, and these anticipated effects are believed to operate through important matching processes between employees and their work environments (Saks, Uggerslev, & Fassina, 2007).

Performance scholars by and large agree that performance is a function of both ability and motivation, with 'ability' referring to having the right KSA's to meet work demands and 'motivation' representing the willingness to leverage these KSA's for organizational benefit (Blumberg & Pringle, 1982; Campbell, 1990). In this respect, scholars have highlighted a direct as well as an indirect effect of P-E fit on performance (Arthur et al., 2006). First, the rationale behind the direct link is that in case of good fit, the work environment reinforces employees' self-concepts (i.e., their values, opinions and beliefs) and their expressed behavior. Relatedly, Theory of Work Adjustment (TWA; Dawis & Lofquist, 1984) maintains that performance is maximized when employees' abilities and needs are in line with environmental demands and supplies, as this facilitates task mastery and allows the employee to fully use its potential. Second, the indirect link occurs because high P-E fit is viewed to lead to highly resourceful working climates, evidenced by, for instance, improved communication among employees, an increase in trust placed in the organization and its members, and a reduction in job hindrances (Edwards & Cable, 2009; Wheeler, Halbesleben, & Shanine, 2013). 'Fitting in' therefore contributes to the fulfillment of basic human needs (Greguras & Diefendorff, 2009), as well as to other valued employee outcomes, like job satisfaction, well-being, commitment, organizational identification, and feelings of communion (Kristof-Brown et al., 2005; Resick, Giberson, Dickson, Wynne, & Bajdo, 2013). Hence, we posit:

Hypothesis 1: P-E fit has a positive cross-lagged effect on performance.

Reversed Causation Hypothesis: Performance → P-E fit

Although the general assumption in the fit literature seems to be that fit causes behavioral outcomes like task performance and OCB, there is reason to suspect that performance outcomes may also turn out to be an antecedent of perceptions of P-E fit. In this respect, it is a well-known fact that past organizational experiences play an important role in shaping our present thoughts and feelings about work (Sonnentag, 2012), as these work experiences provide meaningful insights in the presence or absence of valued job and organizational characteristics (Feldman & Arnold, 1978) – which may influence how persons see themselves fitting into their work environment. Shipp and Jansen (2011) have recently theorized that fit experiences are subject to crafting episodes, as employees craft and recraft stories or "narratives" of fit on a frequent basis. Fit narratives are defined as "the personal stories that individuals craft of their perceived P-E fit experiences over time" (Shipp & Jansen, 2011: 80). According to the authors, these personal stories help individuals to make sense of their current experiences at work. As such, these fit narratives serve as an interpretive lens on the environment and help employees to answer the "why" question of fit (Shipp & Jansen, 2011: 80). In their seminal work on fit narratives, Shipp and Jansen (2011) explicitly suggested a feedback loop between fit outcomes, like performance, and this recrafting process.

In the literature, several theoretical accounts can be found for the existence of such an attribution process from P-E fit to performance. For instance, self-regulation theory proposes that

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past performance information may shape individuals' beliefs regarding their own capacities to meet specific task demands (Carver & Scheier, 1981, 1998; Johnson, Taing, Chang, & Kawamoto, 2013), which implies a feedback loop from performance to fit perceptions (i.e., through feelings of competence and self-efficacy). Moreover, self-perception theory (Bem, 1967, 1972) maintains that people infer perceptions about themselves by observing and making sense of their own behaviors, which suggest that workers may self-construct ideas of how well their personal characteristics match those of the work environment as a consequence of observing their own performance behavior. Both self-regulation theory and self-perception theory thus support the idea that people have a need to make sense of discrepant work experiences involving contrast, surprise, and change (Louis, 1980). As such, employees try to make sense of experiences and behavior that deviates from a priori expectations and integrate these new snippets of information into a dynamic narrative involving themselves in relation to their work environments. Hence, we posit:

Hypothesis 2: performance has a positive cross-lagged effect on P-E fit.

METHOD

Procedure and Participants

The data were collected among employees from Belgium, Flanders, between February 2015 and August 2015. General levels of P-O fit, P-J fit, task performance, and OCB-O were assessed at the beginning of the study (T0) and four months later (T0+15 weeks). Additionally, weekly levels of P-O fit, P-J fit, task performance, and OCB-O were assessed during six consecutive weeks, i.e., from the second (T0+1 week) to the seventh (T0+6 weeks) week of the study. We specifically targeted employees who worked at least part-time (i.e., 50% of full-time employment) and who held exactly one paid job. Our initial sample comprised 215 respondents who completely filled out the T0 questionnaire and met all inclusion criteria. In order to increase the reliability of our weekly analysis, we pooled the data over the five weekly samples (for an example, see e.g. Allen & de Grip, 2012). Of the total sample, more than half of the respondents were female (54.4 percent). Mean age of the sample was 34 years (SD = 9.76), ranging from 20 to 62 years.

Measures

All P-E fit and performance instruments were measured using a 7-point Likert scale format, ranging from 1 (*totally disagree*) to 7 (*totally agree*). Global measures of P-E fit and performance constructs were used for the general measures on week 1 (T0) and week 16 (T0+15 weeks), while adapted versions of the same questionnaires were used for our weekly measures (i.e., week 2 to week 7). P-O fit was measured in terms of value congruence with 3 items from Cable & DeRue (2002). P-J fit was measured with six items in terms of demands-abilities (D-A) fit and need-supplies (N-S) fit (Cable & DeRue, 2002). Task performance was measured with seven items from Williams and Anderson (1991). OCB-O was measured with six (general measures) versus three (weekly measures) items from Dalal, Lam, Weiss, Welch, and Hulin (2009).

RESULTS

Measurement Models

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The initial hypothesized measurement model with four separate but correlated factors (P-O fit, P-J fit, OCB-O, and task performance) did not provide the best fit with the data when compared to three other alternative models. Both the model fit indices and the results from the SB-χ2 - difference test indicated that a five factor model with value fit, D-A fit, N-S fit, task performance, and OCB-O treated as distinct latent factors fitted the data significantly better than the hypothesized four factor model and the two other alternative models. Hence, given that the fit indices for this five factor model were good on all measurement occasions, we chose this five factor model as our final measurement model. All items loaded significantly on their respective latent factors.

Descriptive Results

All correlations between fit variables (value fit, D-A fit, N-S fit) and performance variables (task performance and OCB-O) were positive and significant. Momentary correlations between P-E fit and performance variables were generally high, ranging from $r = .34$ to $r = .59$ across weekly time intervals and $r = .18$ and $r = .64$ across the four months time interval. Both for the weekly and the four months time interval, OCB-O generally showed the highest momentary correlations with value fit, followed by N-S fit and D-A fit. Conversely, task performance generally showed the highest correlations with D-A fit.

Structural Models and Tests of the Hypotheses

All analyses were conducted separately for task performance and OCB-O by means of structural equation modelling using Mplus software (Muthén & Muthén, 1998-2010). In order to test our hypotheses, we first started by specifying three bivariate cross-lagged models combining each of the P-E fit constructs (i.e., value fit, D-A fit, and N-S fit) separately with task performance and OCB-O. In order to test for the combined cross-lagged effects of all P-E fit constructs simultaneously, we next specified a general cross-lagged model in which we combined all P-E fit constructs with task performance and OCB-O.

Task performance. First, concerning the time lag of one week, the fit indices for the bivariate cross-lagged models indicated that the normal causation model provided a better fit to the data than the stability, reversed causation, and reciprocal causation model both for value fit (ΔSB-χ2, $\Delta df = 7.35, 1; p \leq .01$) and D-A fit ($\Delta$SB-$\chi$2, $\Delta df = 6.90, 1; p \leq .01$). Hence, a significant normal causation effect of value fit ($\beta = .10; p \leq .01$) and D-A fit ($\beta = .10; p \leq .01$) on task performance was found. For N-S fit, however, the stability model provided the best fit with the data. The normal causation effects of value fit ($\beta = .12; p \leq .05$) and D-A fit ($\beta = .13; p \leq .05$) on task performance were both confirmed in the overall cross-lagged model. Second, concerning the time lag of four months, the fit indices for the bivariate cross-lagged models indicated that a reversed causation model provided the best fit to the data in terms of value fit (ΔSB-χ2, $\Delta df = 3.32, 1; p \leq .05$), while a normal causation model best fitted the data in terms of D-A fit (ΔSB-χ2, $\Delta df = 4.41, 1; p \leq .05$). With regard to N-S fit, the stability model fitted the data best. However, while the overall cross-lagged model analysis showed that the normal causation model fitted the data best, the normal causation effect of D-A fit on task performance was rendered marginally significant ($\beta = .19; p = .06$).

OCB-O. First, concerning the time lag of one week, the fit indices for the bivariate cross-lagged models showed support for the reciprocal causation model in terms of value fit (ΔSB-χ2, $\Delta df = 14.6, 2; p \leq .001$), the stability model in terms of D-A fit (SB-χ2, $df = 64.24, 44$), and the reversed

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causation model in terms of N-S fit (ΔSB-χ2, Δdf = 7.12, 1; $p \leq .01$). Hence, support was found for both a normal causation effect of value fit on OCB-O ($\beta = .12$; $p \leq .05$) and a reversed causation effect of OCB-O on value fit ($\beta = .11$; $p \leq .01$), as well as for a reversed causation effect of OCB-O on N-S fit ($\beta = .10$; $p \leq .05$). These results were confirmed in the overall cross-lagged model. Here, the reciprocal causation model fitted the data significantly better than either the stability, normal, or reversed causation model (ΔSB-χ2, Δdf = 23.50, 12; $p \leq .01$), and additional support was found for a normal causation effect of value fit on OCB-O ($\beta = .12$; $p \leq .05$), and a reversed causation effect of OCB-O on both value fit ($\beta = .13$; $p \leq .01$) and N-S fit ($\beta = .11$; $p \leq .05$). Second, concerning the time lag of four months, the fit indices for the bivariate cross-lagged models indicated that the reversed causation model fitted the data best in terms of value fit (ΔSB-χ2, Δdf = 12.09, 1; $p \leq .001$), while the stability model fitted the data best in terms of both D-A and N-S fit. As a result, a reversed causation effect of OCB-O on value fit emerged ($\beta = .33$; $p \leq .001$). This result was confirmed in the overall cross-lagged model. Here, the reversed causation model fitted the data significantly better than either the stability, normal, or reversed causation model (ΔSB-χ2, Δdf = 20.53, 9; $p \leq .01$), and additional support was found for a reversed causation effect of OCB-O on value fit ($\beta = .31$; $p \leq .001$).

DISCUSSION

A time-specific comparison of the bidirectional relationships between P-E fit and performance variables in a pooled and heterogeneous sample of 215 Belgian employees generally showed evidence for the existence of a normal causation link between P-E fit and task performance and a reversed causation link between P-E fit and OCB-O. Moreover, while most of the observed effects where time specific and mainly unfolded on the short term (i.e., over the course of one week), the effects of D-A fit on task performance and OCB-O on value fit showed robustness over time.

Nature of the relationship between P-E fit and performance

With regard to the nature of the relationship between P-E fit and performance, our results generally showed evidence for the existence of a normal causation link between P-E fit variables and task performance, and a reversed causation link between OCB-O and P-E fit variables. First, and with regard to task performance, we found evidence for a normal causation effect of value fit over the course of one week and a normal causation effect of D-A fit over the course of both one week and four months. With the exception of the normal causation effect of D-A fit over the course of four months, all these effect remained significant when comparing the bivariate cross-lagged models to the overall cross-lagged model. These – in the literature often anticipated – normal causation effects of value fit and D-A fit have been well documented in previous research. For instance, D-A fit constitutes an important dimension of P-J fit (Kristof, 1996; Kristof-Brown et al., 2005), which can be seen as a theoretical proximal determinant of task performance. Likewise, value congruence allows for a better understanding of work expectations and organizational demands and is viewed to lead to better communication among employees and an increase in trust placed in fellow coworkers (Edwards & Cable, 2009), all of which may positively impact task performance. Second, regarding OCB-O, consistent evidence was found for a reciprocal causation effect between value fit and OCB-O over the course of one week, a reversed causation effect of OCB-O on value fit over the course of four months, and a reversed causation effect of OCB-O on N-S fit over the course of one week. No evidence was found for a relationship between OCB-O and

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D-A fit, which might be explained by the fact that OCB-O is an organization-centered phenomenon for which processes of employee need fulfillment related to N-S fit (e.g., see Greguras & Diefendorff, 2009) and interpersonal attraction related to value congruence (e.g., see Edwards & Cable, 2009) are more relevant, while D-A fit has more proximity to core aspects of the job itself (i.e., job performance). Moreover, these results indicate that levels of OCB-O tend to influence perceptions of value fit, rather than the away around. This hence suggests that employees may adjust their perceptions of value fit by contemplating on, and making rational sense of, their own helping behavior towards the organization. Alternatively, OCB-O may act as a proxy or indicator of the degree of socialization. Engaging in OCB-O requires adequate understanding of, and adherence to, organizational values, norms and policies, which signals successful socialization. In this respect, longitudinal studies have consistently showed that value fit indeed improves following increased organizational socialization (e.g., Cable & Parsons, 2001; Chatman, 1991).

Role of time in shaping the fit-performance relationship

As with regard to the role of time, the results indicate that, although the strongest observed relationship was found between OCB-O and value fit over the course of four months, the majority of the significant relationships between P-E fit and performance variables unfolded over the course of one week. Moreover, with the exception of the normal causation effect of D-A fit on task performance and the reversed causation effect of OCB-O on value fit, all observed effects were time specific and did not generalize across time intervals. Only the effects of D-A fit on task performance and OCB-O on value fit displayed some degree of robustness over time. This might indicate that most of the observed effects of fit variables on performance outcomes (i.e., value fit → task performance, N-S fit → task performance, and value fit → OCB-O) potentially decrease in strength over time, with the exception being the effect of D-A fit on task performance. Overall, these results favor a 'momentum' scenario over a scenario of stability, indicating that the interplay between perceived P-E fit and self-reported performance is generally time specific and that differences in levels of both P-E fit and performance are momentary in the sense that these differences only produce noticeable short-term effects. Perhaps changes in fit variables affect performance mainly through short term affective processes, like temporary decreases in job satisfaction, well-being, or positive affect caused by sudden disruptions in trust placed in coworkers, a decrease in the quality of communication, or an increase in job stressors. In contrary, the relationships between both OCB-O and value fit and D-A fit and task performance may constitute more higher-order, cognitive processes, which may need a longer time window to fully unfold.

REFERENCES AVAILABLE FROM THE AUTHORS